Appl. No. 10/785,990
Amendment dated September 13, 2007
Reply to Office Action of June 13, 2007

ASA-989-03

REMARKS

Pending Claims

Independent claims 33 and 41 are pending. Claims 29-32, 34-40 and 42-48 have been canceled without prejudice or disclaimer. Claims 1-28 were canceled by prior amendments. No new claims have been added.

35 U.S.C. §101

Claims 29-48 were rejected under 35 USC 101 because the invention was alleged to be directed to non-statutory subject matter. Claims 29-32, 34-40 and 42-48 have been canceled, and the rejection of these claims is now moot.

Claims 33 and 41 achieve a useful, tangible and concrete result for accomplishing a practical application by generating a replica database which is accessed in place of the plurality of master databases when executing a job requiring accessing of the plurality of master databases, whereby time required for executing the job is minimized. This limitation has been added to claims 33 and 41 and finds support at, e.g., page 24, lines 14, through page 25, line 8. Accordingly, the claimed invention clearly has real-world value in that a single database is generated and is accessed thereby reducing execution time for jobs that would otherwise require accessing multiple master databases. Applicant respectfully submits that generating a replica database that is accessed in place of the plurality of master databases when executing a job is a useful, tangible and concrete result having a practical real-

world application and value. Claims 33 and 41 have been amended by adding the

above limitation to address the rejections of these claims under 35 U.S.C. §101.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the

rejections under 35 U.S.C. §101. Further, even if the rejections are maintained,

Applicant respectfully requests entry of the amendments as they put the claims into

better condition for appeal.

35 U.S.C. §112

Claims 29-48 stand rejected under 35 U.S.C. §112, second paragraph as

being indefinite. Claims 29-32, 34-40 and 42-48 have been canceled, and the

rejection of these claims is now moot.

With regard to claim 33, the Office Action (page 14, item 14) states that the

steps do not replicate database from "master databases", but merely "replications of

data" formed. In response, Applicant believes the claim language has been

misinterpreted. Applicant's claim is directed to generating and managing a "replica

database", which is derived from a joining of data of two or more master databases.

This is accomplished by replicating some of the data of the master databases to the

replica database. Applicant has deleted the word "replication" from the preamble to

the claims for clarification.

Also with regard to claim 33, the Office Action states that the steps of "in

response to reception of a data operation…", "determining…", "when timing

conditions...", and "referring to..." are indefinite as lacking concrete active limitations

as to how the steps are accomplished. In response, Applicant notes that "timing

conditions" are defined at lines 6-8 of claim 33, i.e., the timing conditions set timings

at which replications of data are performed to the replica database from the master

databases. Timing conditions are similarly defined in claim 41. Thus, Applicants

respectfully disagree that the timing conditions are not defined. Further, in view of

this, the step of determining whether a processing result of the data operation

request meets the timing conditions clearly requires a determination of whether it is

time to perform a replication of data to from the master databases to the replica

database. Thus, the steps of "when timing conditions are met..." should also be self-

explanatory. With respect to the step of "referring to said stored operation

information to acquire the operated record subject to the data operation...", Applicant

notes that "said stored operation information" should read "said stored identification

information of the operated record" for proper antecedence. Accordingly, Applicant

has amended claims 33 and 41 to correct this error.

Further with respect to the rejection of claims 41-48 (page 16, item 22, of the

Office Action), Applicant does not understand the reference to the claims not having

"instructions". Applicant respectfully requests that the Examiner clarify this point.

Additionally, the Office Action states that "computer readable medium" is not defined

in the specification. In response, Applicant has amended claim 41 to a process

implementing a program. In view of the foregoing explanation and the amendments

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to claims 33 and 41, Applicant respectfully requests that the rejections of these

claims be reconsidered and withdrawn. Further, even if the rejections are

maintained, Applicant respectfully requests entry of the amendments as they put the

claims into better condition for appeal.

35 U.S.C. §102

Claims 29-48 stand rejected under 35 U.S.C. §102(e) as being anticipated by

Souder et al., U.S. Patent No. 6532479 (hereafter "Souder"). Applicant respectfully

traverses these rejections, and requests reconsideration and withdrawal of the

rejections for the following reasons.

According to Applicant's invention, when an accepted data operation request

satisfies a timing condition, the records stored in one master database and subjected

to the data operation are joined with another of the plurality of master databases

based on a stored joining key corresponding to the timing condition to generate a

new record in the replica database. As a result, a replica database can be generated

from a plurality of master databases by storing joining keys, master database names,

replica database names and timing conditions (see, for example, replication control

table 119 in Figs. 4 and 5).

Souder, on the other hand, teaches that snapshots of single tables have a

plurality of copy destinations. For example, portions of customer master table 1212

and order master table 1214 are sent from master site 1200 to client sites 1220 (see,

e.g., FIG. 12 and col. 2, line 31, through col. 3, line 30). These portions of the

master tables are stored as a customer snapshot 1232 and an order snapshot 1234

at one client and a customer snapshot 1252 and an order snapshot 1254 at another

client. The snapshots at one client contain a different subset of the master tables

than the snapshots at the other client.

This is entirely different from Applicant's invention, in which plural master

databases are combined into a single joined database. Applicant's claim 33 includes

a "replica database generated from said plurality of master databases by join

operations". Under claim 33, a joining processing is performed with respect to the

operated record subject to the data operation and said second master database to

be joined. A replica database record generated by the joining processing is reflected

to said replica database to implement to said replica database the data operation

based on said data operation request. Thus, under Applicant's invention, when a

record in one master database is subjected to a data operation (such as inserting,

deleting, changing the record), then the operated record is subject to a joining

processing with the second master database to produce a record for the replica

database. Souder fails to teach or suggest any joining of databases.

Furthermore, according to Applicant's invention, the joining processing is

performed using a joining key. The replica database is "generated from said plurality

of master databases by join operations based on predetermined joining keys". A

joining key can correspond to a timing condition that sets a timing at which a

replication of data is performed to the replica database from the master databases.

Souder teaches the each snapshot is identified by a key comprising the owner

of the snapshot, the name of the snapshot, and the site identifier of the snapshot.

However, Souder fails to teach or suggest a joining operation between snapshots.

Thus, the keys taught by Souder serve an entirely different purpose than Applicant's

joining keys, namely, Souder's keys only serve to identify individual snapshots, and

are not used in joining operations. Thus, Souder also fails to teach or suggest this

aspect of Applicant's claims.

In view of the foregoing, Applicant respectfully submits that independent

claims 33 and 41 are allowable over Souder and the other art of record, whether

taken singly, or in combination.

Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of

Allowance be issued in this case.

Respectfully submitted,

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